

ABSTRACT OF THE DISCLOSURE

A method, a node and a machine-readable medium are provided for dynamically adjusting a beam of an adaptive antenna array (302). A receiving node (101) receives, via a group of antenna array elements (302), a signal from a transmitting node (101). Each received signal from the antenna array elements (101) is digitized and recorded.  $K+1$  output signals are generated from the recorded digitized signal. The  $k+1$  output signals are generated by applying each of a group of weight sets to the recorded digitized signal. Each of the weight sets corresponds to a different one of  $k$  known neighboring nodes (101) and a weight set for generating an omnidirectional propagation pattern. Which one of the  $k+1$  output signals to process is determined. The determined one of the  $k+1$  output signals is processed and the packet encoded in the determined one of the  $k+1$  output signals is decoded.